

Express Mail No.: EV335395338US
International Application No.: PCT/SE03/00789
International Filing Date: 15 May 2003
Preliminary Amendment

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A press-(10) of pressure cell type, which comprises comprising a tray and a force-absorbing press body,(12, 68) which wherein the press body encloses a press chamber, into which press chamber a tray-(20, 60, 60a, 60b, 60c, 60d, 70, 74) is introducible, and the tray comprising comprises a tray frame which defines a space-(26) for arranging at least one of a forming tool and/or a workpiece, characterised in that wherein prestressing means-(24, 72, 76), which induce a compressing prestress which acts in planes parallel to the plane of the tray, are arranged on the external surface-(22) of the tray frame, and that wherein the tray frame presents a curvature along its entire circumference.

2. (Currently Amended) TheA press of pressure cell type as claimed in claim 1, wherein the external surface of the tray frame is entirely curved in the circumferential direction of the tray frame, while the internal surface of the tray frame; i.e. the surface that defines defining said space-(26), presents at least one straight portion in the circumferential direction of the tray frame.

3. (Currently Amended) TheA press of pressure cell type as claimed in claim 1, wherein the internal surface of the tray frame, i.e. the surface that defines defining said space-(26), is entirely curved in the circumferential direction of the tray frame, while the external surface of the tray frame presents at least one straight portion in the circumferential direction of the tray frame.

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4. (Currently Amended) TheA press of pressure cell type as claimed in claim 1, wherein both the external surface of the tray frame and the internal surface of the tray frame, i.e. the surface that defines defining said space (26), are entirely curved in the circumferential direction of the tray frame.

5. (Currently Amended) TheA press of pressure cell type as claimed in any one of claims 1 – 4claim 1, wherein the circumference of the tray frame has a geometrical shape chosen from the group consisting of circular, elliptical and super-elliptical.

6. (Currently Amended) TheA press of pressure cell type as claimed in any one of claims 1 – 5claim 1, wherein said prestressing means comprises at least one prestressing element which is wound round the external surface of the tray frame.

7. (Currently Amended) TheA press of pressure cell type as claimed in any one of claims 1 – 6claim 1, wherein said tray frame comprises at least one plate-shaped, annular lamellar means (20, 60, 60a, 60b, 60c, 60d, 70, 74)lamella which has a central hole, a workpiece being adapted to be machined in the space which is formed by the central hole.

8. (Currently Amended) TheA press of pressure cell type as claimed in any one of claims 1 – 4claim 1, wherein the tray comprises a number of concentric, plate-shaped, annular lamellar means lamellas which abut against one another, each have a central through hole and are located in planes that are parallel to the plane of the tray, a workpiece being adapted to be machined in the space which is mutually formed by the holes of the concentric lamellarlamellasmeans.

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9. (Currently Amended) TheA press of pressure cell type as claimed in ~~any one of claims 7-8 combined with claim 6~~, wherein the said tray frame comprises at least one plate-shaped, annular lamella having a central hole, a workpiece being adapted to be machined in the space which is formed by the central hole, and said at least one prestressing element is being band-shaped and has having essentially substantially the same width as the thickness of a lamellar means lamella, each lamellar means lamella being provided with a prestressing element.

10. (Currently Amended) TheA press of pressure cell type as claimed in ~~claim 8 or claim 9 combined with claim 8~~, wherein the lamellar means said lamellas are detachable from one another.

11. (Currently Amended) TheA press of pressure cell type as claimed in ~~any one of claims 7-10~~claim 7, wherein the lowest lamellar means (20, 60, 60b, 60d) lamella is detachably arranged on a bottom plate (16, 64) in the press chamber.

12. (Currently Amended) TheA press of pressure cell type as claimed in ~~any one of claims 7-11~~claim 7, wherein a diaphragm support (18, 62) for holding a diaphragm (28) is arranged above and, when pressing the workpiece, in abutment against the uppermost lamellar means (20, 60, 60a) lamella in such a manner that the diaphragm together with a press plate (14, 66) which is arranged in the upper portion of the press chamber, forms a pressure cell, the diaphragm in connection with the supply of pressure medium to the pressure cell being adapted to exert a forming pressure on the workpiece arranged below.

13. (Currently Amended) TheA press of pressure cell type as claimed in claim 12, which is designed with such dimensions that at least the diaphragm support, and optionally ~~one or more~~ at least one lamellar lamellameans, is liftable with the

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purpose of accessing the underlying lamellar-lamellas means inside the press chamber, one or more at least one of said underlying lamellar-lamellas means being removable from the press chamber while the diaphragm support and any remaining lamellar-lamellas means are left inside the press chamber.

14. (Currently Amended) TheA press of pressure cell type as claimed in claim 11, wherein the remaining lamellar-lamellas means are removable from the press chamber when the press chamber is free from said underlying lamellar-lamellas means.

15. (Currently Amended) TheA press of pressure cell type as claimed in any one of the preceding claimsclaim 1, wherein the tray is made of hot-rolled steel plate.

16. (Currently Amended) A tray (20, 60, 60a, 60b, 60c, 60d, 70, 74) for use in a press of pressure cell type (10), the tray comprising:

a try tray frame which defines a space (26) with the purpose of arranging at least one of a forming tool and/or a workpiece, e h a r a c t e r i s e d in that and prestressing means (24, 72, 76), which induce a compressing prestress which acts in planes parallel to the plane of the tray, are arranged on the external surface (22) of the tray frame, and that wherein the tray frame presents a curvature along its entire circumference.

17. (Currently Amended) TheA tray as claimed in claim 16, wherein the external surface of the tray frame is entirely curved in the circumferential direction of the tray frame, while the internal surface of the tray frame, i.e. the surface that defines defining said space (26), presents at least one straight portion in the circumferential direction of the tray frame.

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18. (Currently Amended) The A tray as claimed in claim 16, wherein the internal surface of the tray frame, i.e. the surface that defines defining said space (26), is entirely curved in the circumferential direction of the tray frame, while the external surface of the tray frame presents at least one straight portion in the circumferential direction of the tray frame.

19. (Currently Amended) The A tray as claimed in claim 16, wherein both the external surface of the tray frame and the internal surface of the tray frame, i.e. the surface that defines defining said space (26), are entirely curved in the circumferential direction of the tray frame.

20. (Currently Amended) The A tray as claimed in any one of claims 16—19~~claim 16~~, wherein the circumference of the tray frame has a geometrical shape chosen from the group consisting of circular, elliptical and super-elliptical.

21. (Currently Amended) The A tray as claimed in any one of claims 16—20~~claim 16~~, wherein said prestressing means comprises at least one prestressing element which is wound round the external surface of the tray frame.

22. (Currently Amended) The A tray as claimed in any one of claims 16—21~~claim 16~~, wherein said tray frame comprises at least one plate-shaped, annular lamellar means (20, 60, 60a, 60b, 60e, 60d, 70, 74) lamella which has a central hole, a workpiece being adapted to be machined in the space which is formed by the central hole.

23. (Currently Amended) The A tray as claimed in any one of claims 16—22~~claim 16~~, which comprises a number of concentric, plate-shaped, annular lamellas means which abut against one another, each have a central through hole and are located in planes that are parallel to the plane of the tray, a workpiece being adapted to be

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machined in the space which is mutually formed by the holes of the concentric ~~lamellar lamellas means~~.

24. (Currently Amended) ~~The A tray as claimed in any one of claims 22-23 combined with claim 21~~ claim 21, wherein said tray frame comprises at least one plate-shaped, annular lamella which has a central hole, a workpiece being adapted to be machined in the space which is formed by the central hole, the said at least one prestressing element being band-shaped and having essentially substantially the same width as the thickness of a ~~lamellar means~~ lamella, each ~~lamellar means~~ lamella being provided with a prestressing element.

25. (Currently Amended) ~~The A tray as claimed in claim 23,~~ wherein two ~~lamellar lamellas means~~ which abut against one another are formed in such a manner that a workpiece, ~~such as a metal sheet~~, which extends transversely to said space, is kept in position when these two ~~lamellar lamellas means~~ have been joined.

26. (Currently Amended) ~~The A tray as claimed in any one of claims 16-25~~ claim 16, wherein the tray is made of hot-rolled steel plate.

27. (Currently Amended) A method for manufacturing a tray (20, 60, 60a, 60b, 60c, 60d, 70, 74) for use in a press (10) of pressure cell type, comprising the steps of:

forming the tray of steel plate, the tray comprising a tray frame, wherein the tray frame is formed such that it presents a curvature along its entire circumference; and

inducing a remaining compressing prestress in the tray, the prestress acting in planes parallel to the plane of the tray.

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28. (Currently Amended) TheA method as claimed in claim 27, wherein ~~the~~an external surface of the tray frame is formed to be entirely curved in the circumferential direction of the tray frame, while ~~the~~an internal surface of the tray frame, i.e. ~~the surface that defines said space (26)~~, is formed to present at least one straight portion in the circumferential direction of the tray frame.

29. (Currently Amended) TheA method as claimed in claim 27, wherein ~~the~~an internal surface of the tray frame, i.e. ~~the surface that defines said space (26)~~, is formed to be entirely curved in the circumferential direction of the tray frame, while ~~the~~an external surface of the tray frame is formed to present at least one straight portion in the circumferential direction of the tray frame.

30. (Currently Amended) TheA method as claimed in claim 27, wherein both ~~the~~an external surface of the tray frame and ~~the~~an internal surface of the tray frame, i.e. ~~the surface that defines said space (26)~~, are formed to be entirely curved in the circumferential direction of the tray frame.

31. (Currently Amended) TheA method as claimed in ~~any one of claims 27 – 30~~claim 27, wherein the circumference of the tray frame is given a geometrical shape chosen from the group consisting of circular, elliptical and super-elliptical.

32. (Currently Amended) TheA method as claimed in ~~any one of claims 27 – 31~~claim 27, wherein the step of forming the tray comprises the steps of:
forming plate-shaped ~~lamellar~~lamellas ~~means~~ (20, 60, 60a, 60b, 60c, 60d, 70, 74) of steel plate; preferably hot rolled steel plate; and
providing each of them said lamellas with a through hole; and

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arranging each lamellar means-lamella with the plane of the plate oriented parallel to the plane of the plate of a concentrically abutting lamellar means, a workpiece being adapted to be machined in the space which is mutually formed by the holes of the concentric lamellar means.

33. (Currently Amended) TheA method as claimed in claim 32, wherein prestressing elements-(24, 72, 76) are wound round the external surface-(22) of the lamellar-lamellas means-with the purpose of providing said prestressing.

34. (Currently Amended) TheA method as claimed in claim 33, wherein a prestressing element is used, which is band-shaped and has essentially substantially the same width as the thickness of a lamellar-means lamella.

35. (Currently Amended) TheA method as claimed in any one of claims 32-34claim 32, which comprises-comprising the step of giving the lamellar means the desired shape by-using a machining step selected from the group consisting of milling, or cutting, such as water cutting, plasma cutting, and flame cutting, etc.

36. (Currently Amended) TheA method as claimed in any one of claims 32-35claim 32, which comprises-comprising the step of making the lamellar lamellas means of steel plate having a thickness of 80-200 mm, preferably 100-150 mm, especially 100-120 mm.

37. (New) The method as claimed in claim 32, comprising the step of making the lamellas of steel plate having a thickness of 100-150 mm.

38. (New) The method as claimed in claim 32, comprising the step of making the lamellas of steel plate having a thickness of 100-120 mm.

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39. (New) The press of a pressure cell type as claimed in claim 6, wherein the tray comprises a number of concentric, plate-shaped, annular lamellas which abut against one another, each have a central through hole and are located in planes that are parallel to the plane of the tray, a workpiece being adapted to be machined in the space which is mutually formed by the holes of the concentric lamellas, and said at least one prestressing element being band-shaped and having substantially the same width as the thickness of a lamella, each lamella being provided with a prestressing element.

40. (New) The press of pressure cell type as claimed in claim 39, wherein said lamellas are detachable from one another.

41. (New) The tray as claimed in claim 21, which comprises a number of concentric, plate-shaped, annular lamellas which abut against one another, each have a central through hole and are located in planes that are parallel to the plane of the tray, a workpiece being adapted to be machined in the space which is mutually formed by the holes of the concentric lamellas, said at least one prestressing element being band-shaped and having substantially the same width as the thickness of a lamella, each lamella being provided with a prestressing element.